

Amendments to the Specification:

Please replace the abstract with the following new abstract:

ABSTRACT

In an npn-type transistor, the emitter 42 and the collector 43 are formed of an n-type transparent semiconductor, and the base 41 is formed by a p-type transparent semiconductor. The base electrode 44, the emitter electrode 45 and the collector electrode 46 are formed respectively on the base 41, the emitter 42 and the collector 43. As the n-type transparent semiconductor, for example, n-type ZnO is used. The n-type ZnO is ZnO doped with, for example, group III elements, group VII elements. As the p-type transparent semiconductor, for example, p-type ZnO is used. The p-type ZnO is ZnO doped with, for example, group I elements and group V elements.